

## ABSTRACT

A toner gating apparatus for supplying toner through an aperture to a gas channel having a propellant stream. The toner gating apparatus has a traveling wave grid having electrodes. A first gating electrode is located proximate a first side of the aperture. A second gating electrode is located proximate a second side of the aperture. A third gating electrode is located in the gas channel. A first voltage source having a first phase is connected to both the first gating electrode and a first electrode of the travelling wave grid. A second voltage source having a second phase is connected to both the second gating electrode and a second electrode of the travelling wave grid. A third voltage source having a third phase is connected to both the third gating electrode and a third electrode of the travelling wave grid.